inflammatory stage of the operation wound, both troublesome and painful; still the testimony brought forward by Dr. Gouley to the advantages of his plan, is so strong, that we shall be much tempted to follow his advice in the next case that may come under our care. J. A., Jr.

Art. XXVI.—*De la Résection Coxo-femorale pour Carie.* Thèse pour le Doctorat en Médecine, par Richard Good, Docteur en Médecine, etc. 4to. pp. 112. Paris, 1869.

On Excision of the Hip-joint for Caries. By Richard Good, M.D., etc.

This essay or thesis, which is really one of much interest, is divided into six chapters, to which are added an appendix of cases and a bibliographical list of previous monographs or other writings on the subject. We purpose to give our readers a short analysis of Dr. Good's work, and then to give a summary of the statistics which he has collected, together with those which we ourselves have published in the second volume of the *Pennsylvania Hospital Reports.*

After some preliminary remarks, in which Dr. Good says that his researches are meant as supplementary to the labours of M. Le Fort, whose memoir on hip-joint excision was read to the Academy of Medicine in 1860, and published the following year, our author gives in his first chapter a very good historical account of the introduction of this operation into surgical practice, particularly in reference to the difficulties which its advocates have had to contend with in France. The chapter terminates with a carefully prepared table of 112 cases which have occurred since 1860, and which the author has collected from a variety of different sources. In comparing the statistical results deduced from a study of this table with those furnished by other writers, it is to be observed that all the cases classed by Dr. Good as recoveries, are such as have got entirely well, without even a single fistulous opening remaining. Hence the proportion of cures is smaller in Dr. Good's tables than in those which admit as recoveries cases in which superficial openings still exist. The 112 cases of the table are all terminated; besides these, the author has collected 21 others, of which 5 recovered with fistulæ, 7 were still under treatment, and 9 are simply said to be "not cured." Dr. Good's second chapter gives an analysis of his table, and from it we quote the following particulars: Of the whole number (112 cases), 52, or 46½[1] per cent., recovered, and 60, or 53½ per cent., died. Difference of sex appears to exercise little or no influence on the result of the operation, there being but a fractional percentage in favour of males. The mortality of the operation in different countries is as follows: France, 86 per cent.; Russia, 67 per cent.; Germany, 65 per cent.; America, 45 per cent.; and England, 34 per cent. The average age in the successful cases was 11½ years, the youngest patient being a boy of 2, and the oldest a woman of 58. The average age in the fatal cases was 14, the youngest patient being 3, and the oldest 40.

The mortality according to age was as follows: From 2 to 12 years, 41 per cent.; from 12 to 20 years, 60 per cent.; over 20 years, 76 per cent. Of the 60 fatal cases, 10 died in the first week, and 26 in the first month. The chief causes of death were exhaustion (22), phthisis, etc. (10), pyæmia (5), pelvic caries, etc. (4), and diarrhœa (3).

In 29 cases the supposed cause of the disease was noted: in 20 it was attributed to a fall, in 4 to the effects of cold, in 1 to a wound, and in only 4 to constitutional predisposition. The average duration of the disease before operation was twenty-seven months. Nine cases in which the disease was acute, having lasted less than seven months, gave 7 deaths (78 per cent.), while 30 chronic cases (more than two years' duration) gave but 10 deaths (33 per cent.). The head of the femur had undergone spontaneous luxation in 17 cases, of which only 6 died (35 per cent.), while there was no luxation in 93 cases, which give 52 deaths (56 per cent.). Cases where the acetabulum was healthy gave a mortality of 50 per cent., and cases where it was diseased a mortality of 54 per cent. As far as this point was noted, Dr. Good's tables show a more favourable result where the acetabulum is gouged than where it is let alone. The mortality where the great trochanter was left was 61 per cent.; where it was removed, only 48 per cent. In 42 of the 52 recoveries the preserved limb is known to have been more or less useful; in 19 cases the patient could walk alone, and in 9 with the aid of a single cane. The movements of the new joint were restored in 28 cases, while anchylosis occurred only once.

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[1] Dr. Good's percentages are all carried out to two figures of decimals, but in quoting them we have usually taken the nearest unit, above or below.

The percentage of mortality given by Dr. Good is higher than that given by any other writer, and the reason for this is, he says, because his tables include the French cases which have been very fatal, and because some of his cases have been traced for many years to a fatal termination, when in other tables they would have been merely classed as undecided. To estimate the comparative advantages of excision over expectant treatment, Dr. Good refers to the thesis of M. Gibert, published in 1859, which gave an account of twelve cases of hip-disease with suppuration, treated without operation, of which but one recovered, while eight died. Hence Dr. Good places the mortality under expectant treatment at 89 per cent., as compared with a death rate of 52 or 53 per cent. for excision. He concludes the chapter in the following words: "Suppurative coxalgia is a serious malady, which usually ends in death. Resection does not give a very favourable result, but it saves life 46 times in 100, and, moreover, leaves the patient a limb much more useful than could be done by any other treatment."

Chapter III. is called "Indications and Contraindications." Among the circumstances favourable to the success of the operation may be mentioned the absence of organic disease or morbid diathesis, whether inherited or acquired; the limitation of the disease to the head of the femur, when this can be ascertained; the existence of spontaneous luxation; and a chronic course of the disease. The most favourable age for the operation is from three to twelve years, and the proper moment for intervention when an articular abscess has opened externally and has left persistent fistulæ. The chief contraindications are the existence of phthisis or scrofula, great exhaustion of the patient, adult age, or great extent of osseous lesion; if a large portion of the femur be affected, Dr. Good advises amputation in preference to excision. Pelvic abscess is not necessarily a contraindication, and may be evacuated through the acetabulum, as practised by Hancock and Barwell.

Chapter IV. treats of the various operative procedures, of which Dr. Good considers the best to be the simple linear incision behind the trochanter, and Chapter V. is devoted to the after-treatment. For this Dr. Good recommends an apparatus devised by Mr. Barwell, but which differs from the one which is figured in that surgeon's work on *Diseases of the Joints*, in being hinged so as to allow abduction of the limb, and in making counter-extension from the axilla, and not from the groin. Dr. Good lays much stress upon the advice of Heyfelder that passive motion should not be begun for six or eight weeks after the excision, and reprobates the practice of other surgeons who begin such movements as early as the eighth day.

Chapter VI. treats of the results of the operation as regards the limb. Dr. Good's tables give but one instance of anchylosis, which he agrees with most writers in considering as less desirable than ligamentous union. Under the heading of "Utility of the Limb," Dr. Good gives a description, with two figures, of Dr. Sayre's operation for anchylosis of the hip-joint, an operation which our author considers to be in no degree an imitation or modification of Dr. Barton's. The shortening of the limb, in the cases collected by Dr. Good, was noted in thirty-five instances, the least amount being half an inch, and the greatest four inches. The observations of Flourens, Humphrey, and others are referred to, as showing that the growth of the femur is principally from its lower epiphyseal cartilage, and that excision of the hip is therefore less apt to be followed by shortening than excision of the knee.

Finally, comparing our author's statistics with those published by ourselves, we find 66 cases included in both tables; with regard to some of these, however, Dr. Good's researches furnish additional information. We have therefore to add to the 242 cases which we ourselves collected, 46 from Dr. Good's table, together with 10 out of 21 which he has collected but not tabulated, the remaining 11 being already included in our own tables. Four of these 10 were recoveries, though with fistulæ, while the results of the other 6 cases were undetermined. We have then a total of 298 cases, in 246 of which the results are known. The total number of recoveries (including those with fistulæ) is 130, and the total number of deaths 116, being a mortality of 47.15 per cent. of terminated cases, or of 38.93 per cent. of all cases submitted to operation. The death-rate for different ages, and the comparative results of partial and total excision, will appear from the following tables:—

Age.	Recovered.	Died.	Result undetermined.	Total.	Mortality per cent.	
					Of terminated cases.	Of whole number of cases.
Under 5 years . . .	9	7	1	17	43.75	41.18
Between 5 and 10 years	51	23	15	89	31.08	25.84
" 10 " 15 "	39	25	16	80	39.06	31.25
" 15 " 20 "	11	15	1	27	57.69	55.56
" 20 " 30 "	10	17	3	30	62.96	56.67
Over 30 years . . .	2	11	1	14	84.61	78.57
Age not stated . . .	8	18	15	41	69.23	43.90
Total	130	116	52	298	47.15	38.93

Form of excision.	Recovered.	Died.	Result undetermined.	Total.	Mortality per cent.	
					Of terminated cases.	Of whole number of cases.
Total excision . . .	58	44	12	114	43.14	38.60
Partial " . . .	20	17	...	37	45.95	45.95
Form not stated . . .	52	55	40	147	51.40	37.41
Total	130	116	52	298	47.15	38.93

It is thus seen that the mortality of hip-joint excision is least between the ages of 5 and 10 years, and after 15 years rises very rapidly, so that in adult life the operation becomes one of very great risk, probably quite as much so as hip-joint amputation, of which the death-rate is estimated at 58.56 per cent. for all cases occurring in civil practice and at all ages. The second table shows that total are rather more successful than partial excisions, and if those cases where this point is not indicated be considered as partial excisions, the difference will still be maintained; the mortality percentages being then 43.14 against 50 for terminated cases, and 38.60 against 39.13 for all cases submitted to operation; an unanswerable argument, it seems to us, in favour of freely gouging the acetabulum whenever it is found diseased.

In taking leave of Dr. Good's essay, we would recommend it to the attention of those of our readers who are interested in surgical statistics, as a valuable contribution to the literature of its subject. With this volume and Dr. Otis's splendid *Circular No.* 2, which we reviewed in the last number of this Journal, we may fairly suppose that, for the present, to borrow a Gallicism, the "last word" has been spoken on excision of the hip-joint. J. A., Jr.